(12) DEMANDE INTERNATIONALE PUBLIÉE EN VERTU DU TRAITÉ DE COOPÉRATION EN MATIÈRE DE BREVETS (PCT)

(19) Organisation Mondiale de la Propriété Intellectuelle
Bureau international

(43) Date de la publication internationale
31 décembre 2003 (31.12.2003)

PCT

(10) Numéro de publication internationale
WO 2004/001493 A1

(51) Classification internationale des brevets[7] :
G02F 1/1339, 1/1333

(21) Numéro de la demande internationale :
PCT/EP2003/006024

(22) Date de dépôt international : 10 juin 2003 (10.06.2003)

(25) Langue de dépôt : français

(26) Langue de publication : français

(30) Données relatives à la priorité :
02077493.1 21 juin 2002 (21.06.2002) EP

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(81) États désignés *(national)* : AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW.

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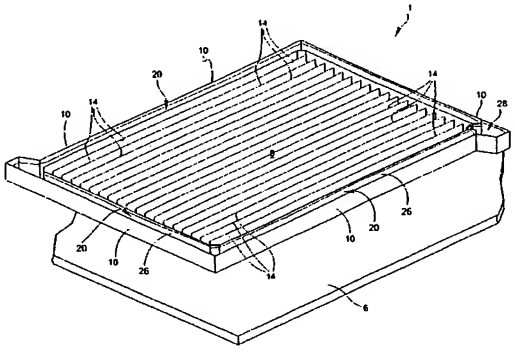
(54) Title: METHOD FOR PRODUCTION OF A DEVICE DEFINING A VOLUME FOR RETAINING A FLUID OR A SENSITIVE MATERIAL

(54) Titre : PROCEDE DE FABRICATION D'UN DISPOSITIF DELIMITANT UN VOLUME POUR LE CONFINEMENT D'UN FLUIDE OU D'UNE MATIERE SENSIBLE



(57) Abstract: The invention relates to a method for production of at least one device (2, 30, 48), defining a volume (8), for retaining a fluid or a sensitive material susceptible to a change in physical properties, particularly optical properties under the effect of application of a voltage, or in electrical properties under the effect of the application of a constraint or an irradiation. Said device (2, 30, 48) comprises at least one first front substrate (4, 38, 56) and at least one second rear substrate (6, 32, 50) held at a constant distance from each other, said two substrates (6, 32, 50; 4, 38, 56) being connected by a sealed joint (24, 46, 72) which defines the retention volume (8) for the sensitive material or fluid. The method is characterised in comprising the following steps: forming the structure of at least one septum (12, 44, 66) on one of the substrates (6, 32, 50) which defines the volume (8) for retention of the sensitive medium or fluid with the internal lateral face thereof, bringing the second substrate (4, 38, 56) together with the first substrate (6, 32, 50), introduction of a jointing material which can run into the gap (22), defined by the lateral external face of the septum (12, 44, 66) and the two superimposed substrates (6, 32, 50; 4, 38, 56) until at least a part of the volume of said gap (22) is occupied by the sealing material and solidification of the sealing material such as to generate the sealing joint (26, 46, 72).

(57) Abrégé : La présente invention concerne un procédé de fabrication d'au moins un dispositif (2, 30, 48) délimitant un volume (8) pour le confinement d'un fluide ou d'une matière sensible susceptible de changer de propriétés physiques, notamment optiques, sous l'effet de l'application dune tension, ou de propriétés électriques sous l'effet dune contrainte ou d'un rayonnement, ce dispositif (2, 30, 48) comprenant au moins un premier substrat

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ABSTRACT

METHOD FOR PRODUCING A DEVICE DEFINING A VOLUME FOR RETAINING A FLUID OR A SENSITIVE MATERIAL

The present invention concerns a method of manufacturing at least one device (2, 30, 48) defining a volume (8) for retaining a fluid or a sensitive material that is capable of changing its physical properties, particularly its optical properties, via the application of a voltage, or its electrical properties via stress or radiation, said device (2, 30, 48) including at least a first front substrate (4, 38, 56) and at least a second back substrate (6, 32, 50) maintained at a constant distance from each other, these two substrates (6, 32, 50; 4, 38, 56) being joined by a sealing joint (24, 46, 72) which defines the volume (8) for retaining the sensitive medium or fluid,

said method being characterised in that it includes the steps of:

- structuring at least one wall (12, 44, 66), which defines via its inner lateral face the volume (8) for retaining the sensitive medium or fluid, on one of the substrates (6, 32, 50);

- joining the second substrate (4, 38, 56) to the first substrate (6, 32, 50);

- introducing a sealing material capable of flowing into the gap (22) defined by the outer lateral face of the wall (12, 44, 66) and the two superposed substrates (6, 32, 50; 4, 38, 56) until at least a part of the volume of said gap (22) is occupied by the sealing material, and

- solidifying the sealing material so that the latter forms the sealing frame (26, 46, 72).

Figure 2